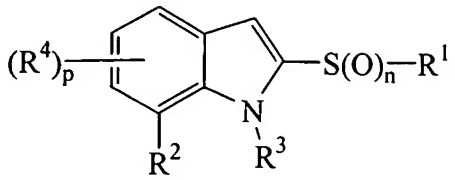
WHAT IS CLAIMED IS:

1. A compound of the formula:



or a pharmaceutically acceptable salt thereof,

wherein

n is 0, 1 or 2;

p is 1 or 2;

R^1 is aryl or heteroaryl;

R^2 is a heterocyclyl;

R^3 is hydrogen, alkyl, or $-C(=O)-R^5$, where R^5 is alkyl, alkoxy, aryl, or aryloxy; and

each R^4 is independently hydrogen, hydroxy, cyano, alkyl, alkoxy, thioalkyl, alkylthio, halo, haloalkyl, hydroxyalkyl, nitro, alkoxycarbonyl, alkylcarbonyl, alkylsulfonyl, arylsulfonyl, haloalkylsulfonyl, amino, alkylamino, dialkylamino, alkyl(aryl)amino, alkylaminocarbonyl, alkylcarbonylamino, alkylcarbonyl(alkylamino), alkylaminosulfonyl, alkylsulfonylamino or methylenedioxyhydrogen, alkyl, alkoxy, halo, or haloalkyl.

2. The compound according to Claim 1, wherein p is 1 and R^4 is located at the 6-position of the indole ring system.

3. The compound according to Claim 1, wherein R^2 is optionally substituted piperazin-1-yl or optionally substituted piperidin-4-yl.

4. The compound according to Claim 3, wherein R^2 is piperazin-1-yl, 4-methylpiperazin-1-yl, 3,5-dimethylpiperazin-1-yl, N-methyl piperidin-4-yl or piperidin-4-yl.

5. The compound according to Claim 4, wherein R^2 is 4-methylpiperazin-1-yl.

6. The compound according to Claim 3, wherein R^1 is optionally substituted phenyl or optionally substituted thienyl.

7. The compound according to Claim 6, wherein R^1 is thien-2-yl or phenyl which is optionally substituted with alkyl, halo or haloalkyl.

8. The compound according to Claim 7, wherein R^1 is phenyl, 2,3-dichlorophenyl, 2-fluorophenyl, 2-methylphenyl, 2-trifluoromethylphenyl, 3-bromophenyl, or thien-2-yl.

9. The compound according to Claim 6, wherein n is 2.

10. The compound according to Claim 9, wherein R^3 is hydrogen, methyl, or –C(=O)–R^5, where R^5 is alkoxy.

11. The compound according to Claim 1, wherein R^1 is thienyl or phenyl which is optionally substituted with a substituent selected from the group consisting of alkyl, halo and haloalkyl.

12. The compound according to Claim 11, wherein R^1 is phenyl, 2,3-dichlorophenyl, 2-fluorophenyl, 2-methylphenyl, 2-trifluoromethylphenyl, 3-bromophenyl or thien-2-yl.

13. The compound according to Claim 11, wherein n is 2.

14. The compound according to Claim 13, wherein R^2 is optionally substituted piperazin-1-yl or optionally substituted piperidin-4-yl.

15. The compound according to Claim 14, wherein R^2 is piperazin-1-yl, 4-methylpiperazin-1-yl, 3,5-dimethylpiperazin-1-yl, N-methyl piperidin-4-yl or piperidin-4-yl.

16. The compound according to Claim 15, wherein R^3 is hydrogen, methyl or –C(=O)–R^5, where R^5 is alkoxy.

17. The compound according to Claim 1, wherein n is 2.

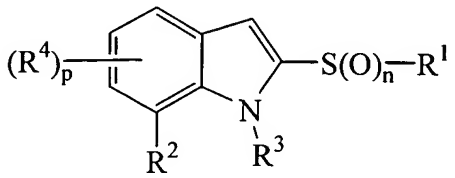
18. The compound according to Claim 17, wherein R^1 is thienyl or phenyl which is optionally substituted with a substituent selected from the group consisting of alkyl, halo, haloalkyl, and a mixture thereof.

19. The compound according to Claim 18, wherein R^2 is optionally substituted piperazin-1-yl or optionally substituted piperidin-4-yl.

20. The compound according to Claim 19, wherein R^3 is hydrogen, methyl or $-C(=O)-R^5$, where R^5 is alkoxy.

21. The compound according to Claim 1, wherein said compound is 2-benzenesulfonyl-7-(4-methylpiperazin-1-yl)-1H-indole.

22. A method for producing a 2-substituted indole of the formula:



wherein

n is 0, 1, or 2;

p is 1 or 2;

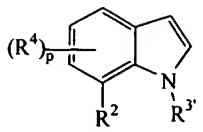
R^1 is aryl or heteroaryl;

R^2 is a heterocycle optionally protected with a protecting group;

R^3 is hydrogen, alkyl, or $-C(=O)-R^5$, where R^5 is alkyl, alkoxy, aryl or aryloxy; and

each R^4 is independently hydrogen, hydroxy, cyano, alkyl, alkoxy, thioalkyl, alkylthio, halo, haloalkyl, hydroxyalkyl, nitro, alkoxycarbonyl, alkylcarbonyl, alkylsulfonyl, arylsulfonyl, haloalkylsulfonyl, amino, alkylamino, dialkylamino, alkyl(aryl)amino, alkylaminocarbonyl, alkylcarbonylamino, alkylcarbonyl(alkylamino), alkylaminosulfonyl, alkylsulfonylamino or methylenedioxy;

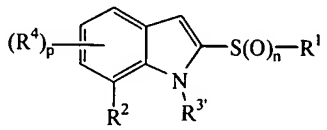
said method comprising contacting a substituted indole of the formula:



wherein $R^{3'}$ is alkyl or $-C(=O)-R^5$,

(i) with a base to produce a deprotonated indole; and

(ii) contacting the deprotonated indole with a sulfonylating agent of the formula: $Y-SO_2-R^1$, where Y is halide, or a disulfide agent of the formula: $R^1-S-S-R^1$ to produce 2-substituted indole of the formula:



(iii) optionally oxidizing the sulfur with an oxidizing agent; and

(iv) optionally removing the protecting group to produce the 2-substituted indole.

23. The method of Claim 22, wherein Y is fluorine.

24. A composition comprising:

(a) a therapeutically effective amount of a compound of Claim 1; and

(b) a pharmaceutically acceptable carrier.

25. A method for treating a CNS disease state in a subject, said method comprising administering to said subject a therapeutically effective amount of a compound of Claim 1.

26. The method of Claim 25, wherein the disease state comprises psychoses, schizophrenia, manic depressions, neurological disorders, memory disorders, attention deficit disorder, Parkinson's disease, amyotrophic lateral sclerosis, Alzheimer's disease and Huntington's disease.

27. A method for treating a disorder of the gastrointestinal tract in a subject, said method comprising administering to said subject a therapeutically effective amount of a compound of Claim 1.

28. A method for treating obesity in a subject, said method comprising administering to said subject a therapeutically effective amount of a compound of Claim 1.